REMARKS/ARGUMENTS

Claim 1 has been amended to recite the transitional phrase "consisting essentially of," to recite the subject matter of claims 4 and 9, and to recite amounts of the at least one fuel and the at least one oxidizer. Claim 1 has also been amended to delete the recited overpressure, penetration level, pressure, damage, flame, and mass. Claims 11 and 25 have been amended to correct claim dependencies. Withdrawn claim 8 has been amended to recite that the reactive material further comprises a compound selected from the group consisting of potassium perchlorate, cupric oxide, molybdenum trioxide, and mixtures thereof. Withdrawn claim 10 has been amended to recite that the reactive material further comprises a class 1.1 explosive selected from the group consisting of trinitrotoluene, cyclo-1,3,5-trimethylene-2,4,6-trinitramine, cyclotetramethylene tetranitramine, hexanitrohexaazaisowurtzitane, 4,10-dinitro-2,6,8,12-tetraoxa-4,10-diazatetracyclo-[5.5.0.$0^{5,9}$.$0^{3,11}$]-dodecane, 1,3,3-trinitroazetine, ammonium dinitramide, 2,4,6-trinitro-1,3,5-benzenetriamine, dinitrotoluene, dinitroanisole, and mixtures thereof. No new matter has been added.

The Office Action mailed June 19, 2006, has been received and reviewed. Claims 1-51 are currently pending in the application. Claims 2-10, 12-15, 17-24, 27-35, and 37-49 have been withdrawn from consideration as being drawn to a nonelected species. Claims 1, 11, 16, 25, 26, 36, 50, and 51 stand rejected. Applicants have amended claims 1, 8, 10, 11, and 25, canceled claims 4, 9, 29, and 34, and respectfully request reconsideration of the application as amended herein.

In Applicants' previous response, claims 1, 11, 25, 26, 36, 50, and 51 were indicated as reading on the elected species and claims 2-10, 12-15, 17-24, 27-35, and 37-49 were indicated as being directed to a nonelected species. However, claims 2-4 and 9 were inadvertently included in the nonelected species. Applicants respectfully submit that claims 2-4 and 9 read on the elected species and should be considered along with claims 1, 11, 16, 25, 26, 36, 50, and 51. Since the subject matter of claims 4 and 9 has been incorporated into independent claim 1, claims 4 and 9 are canceled herein and the parenthetical expression "Canceled" is used for these claims in the "Listing of Claims." The parenthetical expression "Original" is used in the "Listing of Claims" for claims 2 and 3.

Double Patenting Rejection Based on U.S. Patent No. 6,962,634

Claims 1, 11, 16, 25, 26, 37, 50, and 51 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-16 and 22-24 of U.S. Patent No. 6,962,634. In order to avoid further expenses and time delay, Applicants elect to expedite the prosecution of the present application by filing a terminal disclaimer to obviate the double patenting rejections in compliance with 37 CFR §1.321 (b) and (c). Applicants' filing of the terminal disclaimer should not be construed as acquiescence to the Examiner's double patenting or obviousness-type double patenting rejections. Attached are the terminal disclaimer and accompanying fee.

35 U.S.C. § 112 Claim Rejections

Claims 1, 11, 16, 25, 26, 36, 50, and 51 stand rejected under 35 U.S.C. § 112, first paragraph as allegedly lacking enablement. Applicants have amended claim 1 and respectfully request that the rejection be withdrawn.

Claims 1, 11, 16, 25, 26, 36, 50, and 51 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly being based on a disclosure which is not enabling. Applicants have amended independent claim 1 to recite specific oxidizers, fuels, and amounts, and respectfully request that the rejection be withdrawn.

Claims 1, 11, 16, 25, 26, 36, 50, and 51 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being incomplete for omitting essential elements. Applicants have amended independent claim 1 to recite specific oxidizers, fuels, and amounts, and respectfully request that the rejection be withdrawn.

35 U.S.C. § 102 Anticipation Rejections

Anticipation Rejection Based on U.S. Patent No. 6,896,791 to Posson *et al.*

Claims 1 and 11 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,896,791 to Posson *et al.* ("Posson"). Applicants respectfully traverse this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v.*

Union Oil Co. of California, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Posson discloses a propellant composition that includes a fuel, oxidizer, a latex binder, a nonsolvent organic liquid, and a second gellant liquid. Posson at column 2, lines 28-31. The fuel is a metallic powder, such as silicon, boron, aluminum, magnesium, or titanium. *Id.* at column 4, lines 62-66. The latex binder is a fluoroelastomer, such as a terpolymer of hexafluoropropylene, vinylidene fluoride, and tetrafluoroethylene. *Id.* at column 4, lines 9-11. The oxidizer is an alkali metal nitrate, bromate, chlorate, or perchlorate or a solid nitramine. *Id.* at column 5, lines 31-43.

Posson does not anticipate claim 1 because Posson does not expressly or inherently describe that its propellant composition consists essentially of the recited ingredients. Rather, the propellant composition includes the fuel, oxidizer, latex binder, and second gellant liquid.

Claim 11 is allowable, *inter alia*, as depending from claim 1.

Anticipation Rejection Based on U.S. Patent No. 6,132,536 to Hohmann *et al.*

Claims 1, 11, 16, 25, 26, 36, 50, and 51 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,132,536 to Hohmann *et al.* ("Hohmann"). Applicants respectfully traverse this rejection, as hereinafter set forth.

Hohmann discloses a propellant having a metal powder, oxidizer, and polymer. Hohmann at column 3, lines 40-45. The propellant includes hafnium, zirconium, or tin, a terpolymer of hexafluoropropylene, vinylidene fluoride, and tetrafluoroethylene, potassium perchlorate, and graphite. *Id.* at column 12, line 66 through column 14, line 2.

Hohmann does not anticipate claim 1 because Hohmann does not expressly or inherently describe that its propellant consists essentially of the recited ingredients. Rather, the propellant includes the metal powder, oxidizer, polymer, and graphite.

Claims 11, 16, 25, 26, 36, 50, and 51 are allowable, *inter alia*, as depending from claim 1.

Anticipation Rejection Based on U.S. Patent No. 5,472,536 to Doris *et al.*

Claims 1 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,472,536 to Doris *et al.* ("Doris"). Applicants respectfully traverse this rejection, as hereinafter set forth.

Doris discloses a pyrotechnic composition that includes magnesium, strontium nitrate, sodium nitrate, barium peroxide, Viton, aluminum, potassium perchlorate, manganese dioxide, iron oxide, polyvinyl chloride, potassium nitrate, Teflon®, and ethyl cellulose. Doris at column 2, lines 57-65.

Doris does not anticipate claim 1 because Doris does not expressly or inherently describe that its propellant consists essentially of the recited ingredients. Rather, the pyrotechnic includes numerous other ingredients including, but not limited to, barium peroxide, manganese dioxide, polyvinyl chloride, and ethyl cellulose.

Claim 11 is allowable, *inter alia*, as depending from claim 1.

Anticipation Rejection Based on U.S. Patent No. 6,315,847 to Lee *et al.*

Claims 1 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,315,847 to Lee *et al.* ("Lee"). Applicants respectfully traverse this rejection, as hereinafter set forth.

Lee discloses an igniter composition that includes a binder, fuel, oxidizer, reinforcement, or nitramine. Lee at column 2, lines 15-26 and column 4, lines 33-42. The binder is a polyfluorocarbon. *Id.* at column 3, lines 23-28. The oxidizer is Teflon®. *Id.* at column 4, lines 13-19. The fuel is magnesium, boron, or zirconium. *Id.*

Lee does not anticipate claim 1 because Lee does not expressly or inherently describe that its igniter composition consists essentially of the recited ingredients. Rather, the igniter composition includes other ingredients, such as a reinforcement or a nitramine.

Claim 11 is allowable, *inter alia*, as depending from claim 1.

Anticipation Rejection Based on U.S. Patent No. 6,042,702 to Kolouch *et al.*

Claims 1, 11, and 16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,042,702 to Kolouch *et al.* ("Kolouch"). Applicants respectfully traverse this rejection, as hereinafter set forth.

Kolouch discloses an electrochemical cell that includes a current distributor having a conductive polymer composite material formed from an organic polymer and an electrically conductive filler material. Kolouch at column 8, line 55 through column 9, line 6. The organic polymer is a fluoroelastomer, such as a terpolymer of hexafluoropropylene, vinylidene fluoride, and tetrafluoroethylene. *Id.* at column 9, lines 21-29. The filler material is a nitride, boride, or carbide of hafnium. *Id.* at column 9, lines 36-41.

Kolouch does not anticipate claim 1 because Kolouch does not expressly or inherently describe that its conductive polymer composite material consists essentially of the recited ingredients. In addition, since the conductive polymer composite material includes a nitride, boride, or carbide of hafnium as the filler material, the filler material of Kolouch is not properly characterized as teaching one of the recited metals of claim 1.

Claims 11 and 16 are allowable, *inter alia*, as depending from claim 1.

Anticipation Rejection Based on U.S. Patent No. 6,679,176 to Zavitsanos *et al.*

Claim 1 stands rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,679,176 to Zavitsanos *et al.* ("Zavitsanos"). Applicants respectfully traverse this rejection, as hereinafter set forth.

Zavitsanos discloses a reactive projectile having a reactive composition formed from a reactive metal and an oxidizer. Zavitsanos at column 2, lines 18-30. The reactive metal is titanium, aluminum, magnesium, lithium, boron, beryllium, zirconium, thorium, uranium, hafnium, alloys thereof, hydrides thereof, and combinations thereof. *Id.* The oxidizer is lithium perchlorate, lithium chlorate, magnesium perchlorate, magnesium chlorate, ammonium perchlorate, ammonium chlorate, potassium perchlorate, potassium chlorate, and combinations thereof. *Id.* A binder, such as a fluoropolymer, is optionally present. *Id.* at column 3, lines 1-3. Zavitsanos does not disclose examples of the binder.

Zavitsanos does not anticipate claim 1 because Zavitsanos does not expressly or inherently describe the fluoropolymers recited in claim 1. In addition, Zavitsanos does not expressly or inherently describe that its reactive composition consists essentially of the recited ingredients because the reactive composition of Zavitsanos also includes an oxidizer.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on Zavitsanos and Further in View of Posson

Dependent claims 16, 25, 26, 50, and 51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zavitsanos, as applied to claim 1 above, and further in view of Posson. Applicants respectfully traverse this rejection, as hereinafter set forth.

Claims 16, 25, 26, 50, and 51 depend directly or indirectly on claim 1 and, therefore, are allowable, *inter alia*, as depending therefrom.

M.P.E.P. 706.02(j) sets forth the standard for an obvious rejection:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The obviousness rejection of claims 16, 25, 26, 50, and 51 is improper because the cited references do not provide a motivation to combine to produce the claimed invention. To provide a motivation or suggestion to combine, the prior art or the knowledge of a person of ordinary skill in the art must "suggest the desirability of the combination" or provide "an objective reason to combine the teachings of the references." M.P.E.P. § 2143.01. "[I]t is fundamental that rejections under 35 U.S.C. § 103 must be based on evidence" and that the evidence "must be based on objective evidence of record." *In re Lee*, 61 U.S.P.Q.2d 1430, 277 F.3d 1338, 1342-1343 (Fed.Cir. 2002). The Examiner "cannot rely on conclusory statements when dealing with

particular combinations of prior art and specific claims, but must set forth the rationale on which it relies." *Id.* at 1345.

The Examiner acknowledges that Zavitsanos does not teach or suggest a thermoplastic terpolymer of tetrafluoroethylene, hexafluoropropylene, and vinylidene fluoride and relies on Posson as providing this teaching. Office Action of June 19, 2006, p. 8. The Examiner states that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fluorinated polymer taught by Posson since these polymers are used in munitions and since Zavitsanos generally suggests that fluorinated polymers can be used." *Id.* However, Zavitsanos does not suggest the desirability of, or provide an objective reason for, the combination because Zavitsanos does not provide examples of fluoropolymers that may be used in its reactive composition. Posson also does not suggest the desirability of, or provide an objective reason for, combination because Posson does not suggest using a terpolymer of tetrafluoroethylene, hexafluoropropylene, and vinylidene in other compositions, such as that of Zavitsanos.

In addition, even if the cited references were combined, the claimed invention would not be produced, because Posson does not cure the above-mentioned deficiencies in Zavitsanos. Specifically, the combination of Zavitsanos and Posson would not produce a reactive composition that consists essentially of the recited ingredients.

ENTRY OF AMENDMENTS

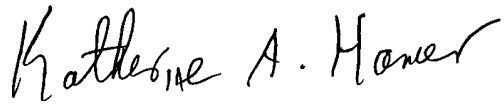
The amendments to claims 1, 8, 10, 11, and 25 should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add new matter to the application.

Applicants consider claim 1 to be generic and note that upon allowance of claim 1, claims 8, 10, 12, 14, 15, 17, 18, 21, 23, and 24 directed to a nonelected species would also be allowable.

CONCLUSION

Claims 1, 8, 10-12, 14-18, 21, 23-26, 36, 37, 39-43, 46, and 48-51 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain that might be resolved by a telephone conference, she is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



Katherine A. Hamer
Registration No. 47,628
Attorney for Applicants
TRASKBRITT
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

Date: September 19, 2006

KAH/ps:slm

Document in ProLaw